**Conceptualizing the Division of One fraction by Another Fraction**

Objective: Students begin to conceptualize the division of fractions by learning to view fraction division problems can be solved by asking how many \_\_\_ are in \_\_\_\_.

In this second lesson students will look at the division fractions in which the divisor has a lower digit than the dividend, but results in a whole number solution. (e.g. 4/6 ÷ 1/3 = 2)

Materials

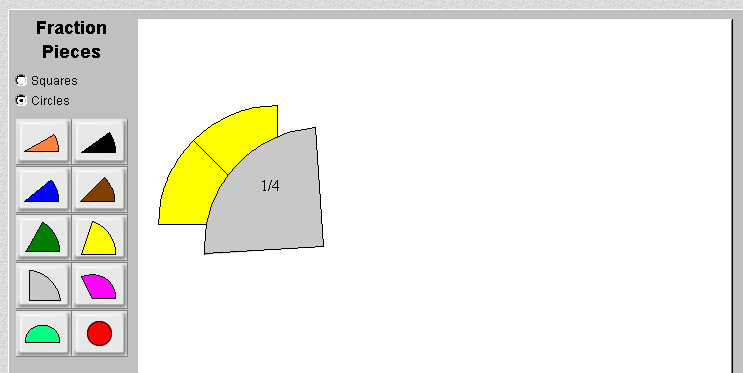
Fraction Circle, Fraction Pies or Fraction Pieces Virtual manipulative.

National Library of Virtual Manipulatives - Fraction Pieces

<http://nlvm.usu.edu/en/nav/frames_asid_274_g_2_t_1.html?open=activities&from=category_g_2_t_1.html>

Lesson

* Using the Fraction Pieces applet put out on the board 4 of the 1/8th ask them to solve the problem. Have them write the symbolic equation for each problem.
  + 4/8 ÷1/4 =
  + 4/8 ÷1/2=
  + Have the students solve the following problems using the manipulatives. Make a list of the equations and solutions on the board.
    - 4/6 ÷1/3 = 6/8 ÷1/4 = 5/10÷ ½ =
    - 2/10÷ 1/5 = 4/8÷1/2= 2/8 ÷ ¼ =

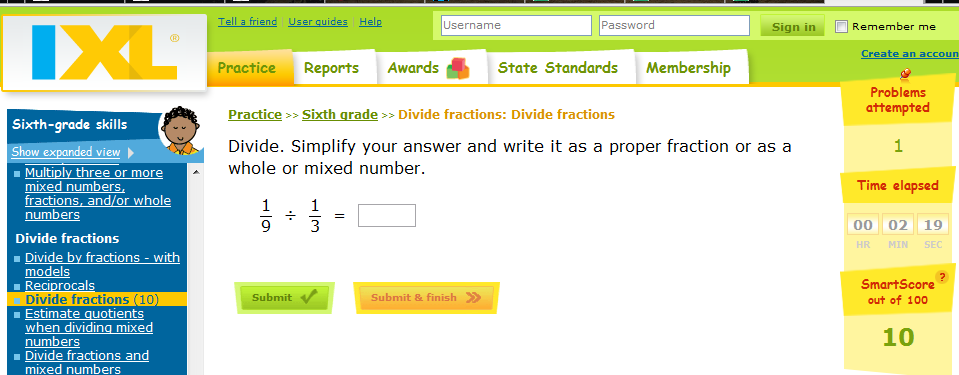


* Have the students show five examples of division problems using a multiple of 1/12 as the dividend. Discuss with the students their results. Make a list of the equations on the board.
* Have the students discover using the fraction pieces as many number equations as possible showing \_\_\_\_ ÷1/2 = Have them share their answers with the class. Make a list of the equations on the board.
* Ask the students to solve the following story problems – remind students to ask the question when dividing fractions, How many \_\_\_\_ are in \_\_\_\_. Have them illustrate their solutions.
  + - You have 1 ½ hours. How many ½ hour shows could you watch on T.V.?
    - You have a board that is 3 ¾ feet long. You need sections that are ¾ of a foot. How many sections can you get from the board?
    - You have 4 ½ cups of juice. You are putting ½ of a cup in each glass. How many glasses can you fill?
    - You are going on a hike that is 6 2/3 miles long. You decide to eat a snack every 2/3 of a mile. How many snacks should you bring?

C:\Users\Arla\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\I15HW8TX\MC900279724[1].wmf

* Ask the students to analyze the equations on the board for a pattern. Help them to see that the solutions to the division is numerator of the quotient divided by the numerator of the divisor and that the denominator of the quotient divided by the denominator of the divisor.
* Practice – Have students practice dividing fractions with the ixl program

<http://www.ixl.com/math/practice/grade-6-divide-fractions>



Assessment – Have students illustrate and solve the following two problems

* 4/10 ÷ 1/5
* 4 ½ ÷ ¾